

Docket No. 520.43090X00  
Serial No.10/651,998  
Office Action dated March 30, 2007

### **ABSTRACT OF THE DISCLOSURE**

An efficient encoding method is provided for error correction coding in high density magnetic recording/reproducing apparatus. A first encoding circuit applies a first error correction coding to the information code sequence and generates an error-correction code sequence. A concatenated encoder is used to divide the plural code sequence blocks having predetermined lengths. The concatenated encoder also executes a second error-correction coding for each code sequence block and generates a second redundant code sequence. A code switch is used to output the plural code sequence blocks and the second redundant code sequence alternatively in order to generate information code sequence that is comprised of the plural code sequence blocks.